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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,907	03/29/2001	Kunihiro Shima	108384-00016	6983

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05/29/2002

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EXAMINER
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WILKINS III, HARRY D

ART UNIT	PAPER NUMBER
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1742

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DATE MAILED: 05/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/787,907	Applicant(s) SHIMA, KUNIHIRO	
	Examiner Harry D Wilkins, III	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                    | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4.5</u> . | 6) <input type="checkbox"/> Other:  |

### DETAILED ACTION

1. Claims 1-3 are pending.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Regarding claims 1 and 2, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

#### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 09/787,440. Although the conflicting claims are not identical, they are not patentably distinct from each other because each claims an Ag metal composite

material with oxides of Mg or Mg and Ni dispersed therein. The ranges of composition of the MgO and NiO disclosed by 09/787,440 overlap the presently claimed range. See *In re Malagari*, 182 USPQ 549 and MPEP 2144.05. The intended use in the preamble of claim 1 has not been given patentable weight because the intended use of a known composition is not patentable. See *In re King* 231 USPQ 136 (Fed. Cir. 1986).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata (US 5,236,523) in view of Applicant's admission of prior art.

Shibata teaches (see abstract) an Ag-oxide composite material. Shibata discloses that the material contains 0.5-25 wt%, in terms of elemental metal, of an oxide of Mg and 0.01-5 wt%, in terms of elemental metal, of an oxide of Ni. Though Shibata discloses a large list for the first and second elements, a specific embodiment (see Table 1) contains Mg as the first element and Ni as the second element. This range overlaps the claimed range of composition.

The intended use in the preamble of claim 1 has not been given patentable weight because the intended use of a known composition is not patentable. See *In re King* 231 USPQ 136 (Fed. Cir. 1986).

However, Shibata does not teach that the material is a "pipe-like" or a "tape-like" Ag alloy for use in a process of treating a superconductive material.

Applicant admits as prior art (see pages 2, lines 4-12 of the specification) that auxiliary material for use with a superconductive material is formed into a tape or pipe and then a multi-layered composite structure is formed. Applicant admits (see page 3, lines 10-18) as prior art that Ag-metal oxide composites have been used as a superconductor auxiliary material.

Therefore, it would have been obvious to one of ordinary skill in the art to have utilized the Ag-metal oxide composite material of Shibata for the superconductor auxiliary material in the conventional shape of a tape or pipe because the material of Shibata provides excellent wear resistance (see col 1, lines 39-44).

8. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sistare et al (US 3,114,631) in view of Tsuji et al (US 4,502,899), Applicant's admission of prior art and Shibata (US 5,236,523).

Sistare et al teach (see col 3, lines 38-48) a method of manufacturing an Ag-metal oxide composite. The method includes, dissolving and casting, followed by rolling and wire drawing. After this, the material is subjected to internal oxidation at 1550°F (843°C) for 72 hours. Then the material is subjected to a cold drawing treatment.

The intended use in the preamble of claim 2 has not been given patentable weight because the intended use of a known composition is not patentable. See *In re King* 231 USPQ 136 (Fed. Cir. 1986).

Sistare et al does not teach: (1) that the internal oxidation occurs in an oxygen atmosphere having a pressure of 3 to 10 atm; (2) that the material is formed into a "tape-like" or "pipe-like" shape; and, (3) that the material is Ag-Mg or Ag-Mg-Ni.

With respect to (1), Tsuji et al teach describe (see col 4, lines 9-12) a conventional process of internal oxidation for Ag-metal oxide materials. The processing parameters include a temperature of 750°C at an oxygen pressure of 4 atmospheres for 100 hours.

Therefore, it would have been obvious to one of ordinary skill in the art to have performed the conventional internal oxidation treatment of Tsuji et al because the processing parameters of Tsuji et al provide for a more efficient process than the older process of Sistare et al. Furthermore, Tsuji et al teach a treatment time of 100 hours and the presently claimed method is for treatment for 20-80 hours. It is within the skill of one in the art to find the optimum treatment time, based on the size of the article to be treated, the temperature and the oxygen content of the atmosphere. Evidence that these are known result effective variables can be seen in Krock et al described below. It would have been obvious to one of ordinary skill in the art to find the optimum treatment parameters, including treatment time, since it has been held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover

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the optimum or workable range by routine experimentation. See *In re Aller* 105 USPQ 233.

With respect to (2), Applicant admits as prior art (see pages 2, lines 4-12 of the specification) that auxiliary material for use with a superconductive material is formed into a tape or pipe and then a multi-layered composite structure is formed. Applicant admits (see page 3, lines 10-18) as prior art that Ag-metal oxide composites have been used as a superconductor auxiliary material.

Therefore, it would have been obvious to one of ordinary skill in the art to have made the Ag-metal oxide material of Sistare et al into a conventional "tape-like" or "pipe-like" material so that it could be used for forming the multi-layered composite structure with a superconductive material.

With respect to (3), Shibata teaches (see abstract) an Ag-oxide composite material. Shibata discloses that the material contains 0.5-25 wt%, in terms of elemental metal, of an oxide of Mg and 0.01-5 wt%, in terms of elemental metal, of an oxide of Ni. Though Shibata discloses a large list for the first and second elements, a specific embodiment (see Table 1) contains Mg as the first element and Ni as the second element. This range overlaps the claimed range of composition. The material of Shibata provides (see col 1, lines 39-44) improved wear resistance.

Therefore, it would have been obvious to one of ordinary skill in the art to have used the material described by Shibata in the process of Sistare et al and Tsuji et al because the material of Shibata provides improved wear resistance.

Regarding claim 3, the composition recited in the present claim 3 overlaps the composition disclosed by Shibata. See *In re Malagari*, 182 USPQ 549 and MPEP 2144.05. It would have been obvious to one of ordinary skill in the art to have used the material described by Shibata in the process of Sistare et al and Tsuji et al because the material of Shibata provides improved wear resistance.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Krock et al (US 3,930,849) teach a Ag-CdO composite material. Krock et al teach (see col 2, lines 57-63) that the oxidizing of the material is typically done at temperatures up to 850°C and for up to 120 hours, but these depend upon the shape, temperature and the oxygen content of the atmosphere (i.e.-partial pressure of O<sub>2</sub>), thus showing that each of these is a result effective variable.

b. Motoyoshi et al (US 4,072,515) teach an Ag-In material that is subjected to internal oxidation. The material also contains Mg and Ni for the purpose of raising the electrical performance of the material as a contact.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D Wilkins, III whose telephone number is 703-305-9927. The examiner can normally be reached on M-F 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 703-308-1146. The fax phone numbers for



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the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Harry D Wilkins, III  
Examiner  
Art Unit 1742



hdw  
May 28, 2002

**ROY KING**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1700**